Advanced Expert System Using Particle Swarm Optimization Based Adaptive Network Based Fuzzy Inference System to Diagnose the Physical Constitution of Human Body

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Abstract. The Korean medicine has suggested 8 distinct combinations of constitutions in a human body. The eccentricity of the physicians is to diagnose the relevant constitution over a patient physical body. To assist the physicians and to improve the diagnosing quality of disease, we present an automating diagnosing method. Hence, to automate the diagnosis of 8 constitutions, an expert system is used, which predicts the constitutions based on given inputs. An automated diagnosis is carried out using rule based optimization expert system, namely Bees Swarm Optimization (BSO) based Adaptive Neuro Fuzzy Interference System (ANFIS). The BSO based ANFIS or BSO-ANFIS is recommended to automate the diagnosis process using standard datasets. The comparative results with ANFIS system and proves that BSO-ANFIS matches well with the physicians report than ANFIS system.

Keywords: Korean constitutions · BSO-ANFIS · Medical expert systems

1 Introduction

The data mining refers to the discovery of meaningful information from the several collections of data. The theory of data mining is represented in the form of data mining model that has its own framework to construct a system to acquire meaning data. The data mining framework is modelled in such a way that it suitably forms a knowledge base from the machine world to the humans. This framework provides the meaningful information to the humans. In case of medical applications, the data mining framework predicts the disease for the purpose of diagnosis [1]. It provides medical solution to